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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,249	08/03/2001	Jong Myeong Kim	KIMJ3008/REF	6264
7590 03/29/2005			EXAMINER	
Bacon & Thomas 625 Slaters Lane 4th Floor Alexandria, VA 22314-1176			JONES, PRENELL P	
			ART UNIT	PAPER NUMBER
			2667	

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/890,249

**Applicant(s)**

KIM ET AL.

**Examiner**

Prenell P Jones

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-10 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) 2-6, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 11, in lines 19-22, "de-spreading the de-scrambled signal to get the desired channel ***by integrating for the symbol period proportional to the data rate***," which is unclear to Examiner as what Applicant is claiming

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al in view of Stilwell et al and Lomp et al.

Regarding claim 1, Chen discloses (Abstract, col. 2, line 25-46) improving the transmission of spread spectrum wherein the architecture includes transmission and receiving data as associated in an CDMA environment, a plurality of code channels associated with code symbols, (col. 3, line 15 thru col. 4, line 21, col. 7, line 27-45) multiple carrier scheme, spread spectrum technique of CDMA, multiple spread spectrum signals transmitted on a plurality of frequencies, Walsh symbol generators outputs spreading sequence that is orthogonal to spreading sequences, scrambling sequence provided by PN generators, performing orthogonal spreading and scrambling in accordance with PN sequences, modulated data from scramblers is provided to multiplexer, (col. 14, line 7-20) which directs data to a summer, and resultant signals are carried on carriers. Chen is silent on transmitting composite signals created by adding signals and data signals with different information. However, in a CDMA spread spectrum communication system whereby data is transmitted and received, Stilwell discloses (Abstract, col. 5, line 5 thru col. 6, line 67, col. 8, line 44-67) reducing spreading code interference as associated in a spread spectrum CDMA environment wherein the architecture includes establishing a composite signal by summing

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spreading signals via an arithmetic unit, modulators generating spread spectrum signals and Lomp (Abstract, col. 5, line 10-55, col. 6, line 31-47, col. 54, line 3-55) discloses improving communication associated with a spread spectrum system (CDMA) having different data rates wherein a spread-spectrum processor generates pilot-code signals, several information signals having different information, transmitting/receiving apparatus, combining (adding) multiple spread-spectrum signals. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement transmitting composite signals created by adding signals and transmitting data with different information as taught by the combined teachings of Stilwell and Lomp with the teachings of Chen for the purpose of further improving transmission and communication of data in a multi-user CDMA spread-spectrum environment.

***Allowable Subject Matter***

6. Claims 7-10 are allowed over prior art.
7. Claims 2-6, 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. The following is a statement of reasons for the indication of allowable subject matter: Although the cited art discloses improving the transmission of spread spectrum wherein the architecture includes transmission and receiving data as associated in an CDMA environment, a plurality of code channels associated with code symbols, multiple

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carrier scheme, spread spectrum technique of CDMA, multiple spread spectrum signals transmitted on a plurality of frequencies, Walsh symbol generators outputs spreading sequence that is orthogonal to spreading sequences, scrambling sequence provided by PN generators, performing orthogonal spreading and scrambling in accordance with PN sequences, modulated data from scramblers is provided to multiplexer, which directs data to a summer, and resultant signals are carried on carriers, reducing spreading code interference as associated in a spread spectrum CDMA environment wherein the architecture includes establishing a composite signal by summing spreading signals via an arithmetic unit, modulators generating spread spectrum signals, different data rates wherein a spread-spectrum processor generates pilot-code signals, several information signals having different information, transmitting/receiving apparatus, they fail to teach or suggest a spreading and scrambling steps perform an orthogonal complex-domain spreading and complex-domain scrambling for improving peak-to-average power ratio, a complex-domain multiplying means for performing the first orthogonal complex-domain spreading with inputs of the transmitting data of the supplementary channels and the orthogonal variable spreading factor, de-spreading a de-scrambled signal using a synchronized identical orthogonal code of a transmitter for each channel, a spreading de-modulator that includes a scrambling code generator and complex-domain multiplying means for de-scrambling low-pass filtered demodulated signal.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

March 10, 2005

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
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3/11/05